DRAFT ENVIRONMENTAL ASSESSMENT FOR MANAGEMENT OF BLACK-TAILED PRAIRIE DOGS AT FORT WILLIAM HENRY HARRISON

MONTANA ARMY NATIONAL GUARD
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EXECUTIVE SUMMARY

This environmental assessment (EA) proposes to capture prairie dogs living in a small colony within the cantonment area of Fort Harrison, Montana and relocate these prairie dogs to an area approximately 0.5 miles north of the present location. This site contains suitable habitat and topography for prairie dog habitation and there are no plans to use this area for facilities or training purposes. Prairie dogs will be released into a containment enclosure of approximately 5.7 acres and will be managed within this area. This prairie dog colony will be open to public viewing. No significant environmental impacts were identified for the Proposed Action. A Lethal Control Action Alternative and a No Action Alternative were developed for prairie dog management at Fort Harrison. Under the Lethal Control Action all prairie dogs would be exterminated by the fall of 1997. The No Action Alternative would continue the present management of periodic use of burrow fumigants to contain prairie dogs. However, major renovation of Fort Harrison during the next few years might severely impact the existing prairie dog colony and long-term population persistence cannot be certain. Due to the location and small size of the existing prairie dog colony there are no sensitive, threatened or endangered wildlife species associated with the prairie dogs, and there is relatively little use of the colony by other wildlife species. Relocation of the colony to a more natural setting will likely result in greater use of the colony by other wildlife species.

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CHAPTER 1

PURPOSE AND NEED FOR PROPOSED ACTION

1.1 INTRODUCTION

Montana Army National Guard, Department of Military Affairs (MT ARNG) is proposing to live trap and remove all black-tailed prairie dogs at a colony located on Fort William Henry Harrison (Fort Harrison) in Helena, MT. The prairie dog colony is presently situated around MT ARNG buildings, next to the Fort Harrison Veterans Administration (VA) Center hospital, in gravel parking lots, and on a maintained lawn in Soldiers Park. The prairie dogs will be relocated to a 5.7 acre site on the northeastern portion of Fort Harrison that is not used by the MT ARNG. This prairie dog colony is one of the few remaining colonies located in the Helena Valley and preservation of this prairie dog population is deemed important. This colony would be available for public viewing and have dispersal barriers to prevent prairie dogs from moving north and east from Fort Harrison. Prairie dogs not required for establishing this new colony would be sent to a prairie dog reintroduction project on the Charles M. Russell National Wildlife Refuge in central Montana.

1.2 PURPOSE AND NEED

The existing location of the prairie dog colony is a cause of concern among building and ground maintenance personnel. Prairie dogs have constructed a burrow at the base of a power pole supplying underground power to a portion of Fort Harrison, and the entrance of the burrow is exactly where the power lines enter the ground. Prairie dogs have also constructed burrows at the bases of other power poles, fire hydrants, of fence posts and a recently planted tree, as well as adjacent to a manhole cover for an underground sewer pipe, and next to a buried sprinkler head. In addition, mounds in maintained lawns frequently contain large rocks capable of damaging lawn mowing equipment. Although these problems are not severe, prairie dog habitation of this area is generally not compatible with MT ARNG operations at Fort Harrison. In addition, the MT ARNG is in the process of a major facility upgrade and portions of the existing colony may be destroyed due to construction of new buildings and landscaping of the grounds (MT ARNG 1996).

There is a need to remove prairie dogs from areas adjacent to buildings and from maintained lawns at Fort Harrison. The purpose of this project will be to relocate these prairie dogs to suitable habitat on a portion of Fort Harrison that has no

current plans for development of buildings and maintained lawns, or for MT ARNG training purposes.

1.3 SCOPE OF DOCUMENT

This environmental assessment (EA) evaluates the Proposed Action to relocate prairie dogs, Lethal Control Action, and the No Action Alternative. This EA describes the alternatives in Chapters 2 and 3, the affected environment in Chapter 4, and the environmental consequences of the alternatives in Chapter 5.

1.4 SCOPING PROCESS

To identify potential significant issues, a meeting with MT ARNG and Montana Dept. of Military Affairs personnel was held on 28 May 1997 to discuss the Proposed Action and alternative actions. A scoping letter describing the proposed action was subsequently sent to residents in the vicinity of the relocation site, and to public and private conservation agencies with some concern about prairie dog management.

CHAPTER 2

DESCRIPTION OF THE PROPOSED ACTION

2.1 INTRODUCTION

The MT ARNG is presently at the initial phase of a major renovation of the facilities and grounds at Fort Harrison. The prairie dog colony is located within the renovation zone and they are not compatible with the goal of developing a modern military training facility. In addition, some prairie dogs may be adversely impacted by this renovation project during building construction and landscaping. The MT ARNG is committed to a non-lethal management solution for these prairie dogs.

2.2 DESCRIPTION OF THE PROPOSED ACTION

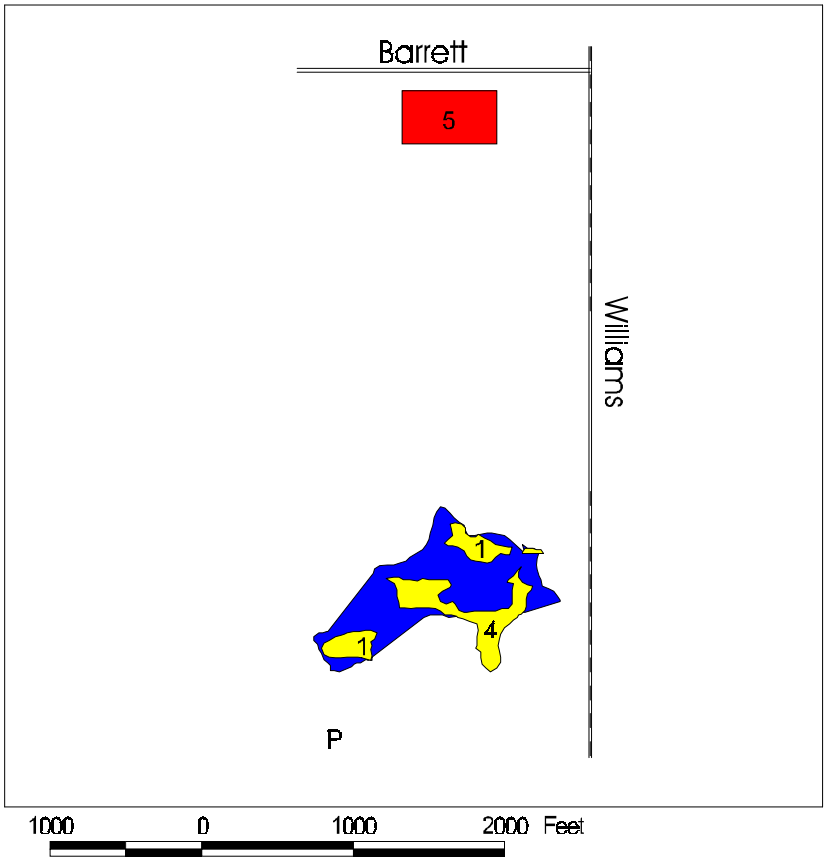
The Proposed Action is to live-trap and remove all prairie dogs from their present occupied areas during late summer or early fall of 1997 (Figure 2-1). Prairie dogs not trapped within a reasonable time frame will be flushed from their burrows with a mixture of soap and water. The captured prairie dogs will be dusted for fleas and relocated to a 5.7-acre (500 feet on a side) enclosure at the northeastern portion of Fort Harrison (Figure 2-1). This enclosure will consist of 3-foot high, 1x2-inch mesh, galvanized welded steel wire buried 18 inches below grade. This wire will be secured to standard 6-foot high chain link security fencing on the north side of the enclosure and to a 3-foot high security fencing on the west, south and east side of the enclosure. Public access to the enclosure will be through Fort Harrison and sufficient space will be provided to accommodate the parking of several cars or one school bus. Entrance into the enclosure will be via one pedestrian gate located on the south side of the enclosure and adjacent to the parking area. The goal of the enclosure will be to contain most of the prairie dogs most of the time. After prairie dogs become established at this site, the west, south, and east fences could be removed if a larger and more natural prairie dog colony is desired.

Prior to releasing prairie dogs into the enclosure, the site will be prepared by mowing all vegetation to approximately 2 inches in height, and augering numerous 6-inch diameter holes at a 30 degree angle to a depth of 2-4 feet to simulate prairie dog burrows and mounds. Between 50 and 100 prairie dogs will be released within the enclosure. This will represent a density of prairie dogs that might normally occur within a prairie dog colony and will also represent a minimum viable population. Prairie dog numbers within the enclosure will be regulated by periodic live trapping and removal of excess animals, or by

periodic baiting with diethylstilbestrol treated oats (a chemosterilant) to reduce prairie dog reproductive potential. Excess prairie dogs trapped during the relocation project will be sent to a prairie dog reintroduction effort at the Charles M. Russell National Wildlife Refuge (CMR). Disposition of prairie dogs to the CMR will be dependent upon receiving approval from the Montana Fish and Game Commission. The CMR may also be the release site of excess prairie dogs in subsequent years. The CMR has already prepared an EA for reintroduction of prairie dogs to colonies extirpated by sylvatic plague.

The existing prairie dog colony encompasses an area of 17 acres if a line is drawn around outlying burrows on the colony perimeter. However, due to buildings, paved streets, and a drainage crossing the colony, only 6.2 acres are actually occupied by prairie dogs. The existing prairie dog colony is located on stream alluvium on the upper margins of the Helena Valley floor. Although the vegetation at this site is highly modified, it is within the needle-and-thread grass/blue grama habitat. The proposed relocation site represents similar physiographic and habitat conditions as the existing colony. The goal of the relocation effort will be to provide a similar acreage of prairie dog occupied area to the existing colony, and to make this colony available to public view.

Figure 2.2-1. Ft. Harrison Prairie Dog Relocation Project



CHAPTER 3

ALTERNATIVES CONSIDERED

3.1 ALTERNATIVE DEVELOPMENT

In addition to the Proposed Action, a Lethal Control Action and No Action Alternatives were developed for this project. Other alternatives were considered and rejected because they were not feasible or were not supported by scientific evidence.

3.2 LETHAL CONTROL ACTION ALTERNATIVE

In the Lethal Control Action Alternative, the entire prairie dog colony would be prebaited with steam rolled oats and 48 hours later one teaspoonful of zinc phosphide treated oats would be placed on each prairie dog mound in the colony. Following an anticipated kill of 80 to 90% of the prairie dogs, 2 aluminum phosphide tablets would be dropped in each active burrow. Treated burrows and all burrow openings in the immediate area would be plugged with soil following insertion of the tablets. This process would be repeated at weekly intervals until all prairie dogs are eliminated.

3.3 NO ACTION ALTERNATIVE

The No Action Alternative would continue with the present prairie dog management. The present management includes periodic lethal control of prairie dogs with burrow fumigants. This effort has generally been directed towards prairie dogs that have dug burrows at unacceptable sites (e.g. next to power poles). Under the present management, prairie dog numbers have decreased and increased depending on use of burrow fumigants. Renovation of Fort Harrison during the next few years will in part occur within prairie dog occupied areas and prairie dogs may be displaced or killed by this activity.

3.4 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER CONSIDERATION

3.4.1 RELOCATE ALL PRAIRIE DOGS TO THE SOUTHWESTERN PORTION OF FORT HARRISON

The southwestern portion of Fort Harrison contains relatively isolated land remaining in natural habitats. This area is used for training exercises but there are no plans to construct buildings in this area. Examination of this area on 28 May 1997 revealed that the possible release site did not contain a large

enough area of level ground to be suitable habitat for prairie dogs. This site is also within the bluebunch wheatgrass/western wheatgrass habitat type which may require periodic grazing or mowing to be suitable for prairie dog occupation. This site also lacks access for the public.

3.4.2 RELOCATE ALL PRAIRIE DOGS TO PRIVATE LAND ALONG THE SOUTHEASTERN FOOTHILLS OF THE ELKHORN MOUNTAINS

A landowner along the southeastern foothills of the Elkhorn Mountains offered to take Fort Harrison prairie dogs. Although this site contains suitable habitat for prairie dogs, relocation of prairie dogs to this site would require approval of the Montana Fish and Game Commission. It is uncertain that approval could be obtained in a timely manner, and it was deemed to be inprudent to develop a relocation project that lacks certainty of approval by the necessary authorities.

3.5 REASONABLY FORESEEABLE CUMULATIVE ACTIONS

The Fort Harrison Master Plan (January, 1996) identifies the continued development of the Fort Harrison cantonment area over the next 10 years. Construction planned at Fort Harrison includes a training site battalion support complex and an armed forces reserve center. Construction of a combat pistol course is also being planned. The Master Plan also provides for ammunition igloos, bachelor officer quarters/bachelor enlisted quarter, a regional simulation center, additional latrines, a laundry facility, and a battalion maintenance shelter. An environmental assessment has not been prepared for the Fort Harrison Master Plan.

3.7 SUMMARY OF POTENTIAL IMPACTS

Areas of environmental and socioeconomic concerns have been identified through the scoping process. Table 3.7-1 summarizes the impacts by resource and alternative.

Table 3.7-1. Summary of potential impacts by alternative for each resource. A + sign indicates a positive impact.

RESOURCE	NO ACTION	PROPOSED ACTION	LETHAL CONTROL
LAND USE	none	slight +	slight +
AESTHETICS	none	none	none
AIR QUALITY	none	none	none
NOISE	none	none	none
GEOLOGY & SOILS	none	none	none
WATER RES.	none	none	none
BIOLOGICAL VEGETATION WEEDS WILDLIFE TES	 none none none none	 slight slight slight + none	 none none slight none
WETLANDS	none	none	none
CULTURAL			
SOCIOECONOM. POPULATION & EMPLOYMENT SOCIAL JUSTICE	none	none	none
HAZARDOUS WASTES	none	none	none

CHAPTER 4

AFFECTED ENVIRONMENT

This chapter describes the affected human environment at Fort Harrison. The Environmental Assessment for the Land Acquisition at Fort William Henry Harrison, Montana Army National Guard (January 1997) describes all aspects of the affected human environment at Fort Harrison. Included in this description is a detailed account of the extent and nature of training operations at the Fort. Discussion of the affected environment in this document is limited to those aspects that directly relate to the prairie dog relocation project.

4.1 LOCATION DESCRIPTION

Fort Harrison is located approximately 3 miles west of Helena, Montana in an intermontane valley. This valley is 25 miles from north to south and 35 miles from east to west and averages about 4,000 feet elevation. The surrounding mountains range from 7,000 to 9,000 feet elevation. Fort Harrison occupies 2,154 acres, an additional 1,727 acres are leased, and an additional 3,580 acres are used with a land use permit. The VA Center is located directly south of Fort Harrison and is an independent Federal facility administered by the Department of Veterans Affairs. All land that prairie dogs occur on at Fort Harrison and at the VA Center is Federally owned.

4.2 LAND USE

Land use within the Fort Harrison cantonment area consists of billeting, dining, latrine facilities, and site support operations, ranges for small arms qualifications, and a drop zone and a helicopter landing area. Land on the southern perimeter of Fort Harrison is occupied by the Veterans Administration. Land use to the east, west, and north of Fort Harrison consists of scattered farms, and residences, grazing land and hilly mountainous terrain. Land immediately north of the proposed relocation site is primarily residential and small farms.

4.3 AESTHETICS AND VISUAL RESOURCES

There are no significant aesthetics and visual resources that apply to the proposed prairie dog relocation project, and these will not be discussed further.

4.4 AIR QUALITY

The Helena Valley has a semiarid climate that is characterized by hot summers (typical maximum 90°F) and cold winters (typical minimum -20°F) with the majority of precipitation falling during late spring and early summer. The average annual precipitation is 11.37 inches and average annual snowfall is 48 inches. Winds are generally westerly throughout the year, averaging 7 to 8 miles per hour. Cold air may be trapped in the Helena Valley during winter forming pronounced temperature inversions. Additional information on air resources is available in the Land Acquisition EA. The proposed prairie dog relocation project will not impact air resources and this aspect will not be address in Chapter 5 (Environmental Consequences).

4.5 NOISE

Sounds that disrupt normal activities or otherwise diminish the quality of the environment are designated as noise. Prairie dog vocalizations are not sufficiently loud to qualify as noise and the trapping and relocation effort will not create sounds qualifying as noise. This aspect will not be discussed in Chapter 5.

4.6 GEOLOGICAL AND SOILS

4.6.1 Physiography/Geology

Fort Harrison is located at the southwestern edge of the Helena Valley. This valley encompasses approximately 875 square miles and is surrounded by mountain ranges. The elevation at Fort Harrison ranges from 3,950 feet at the southeastern corner to 5,252 along the western boundary.

The northeastern corner of Fort Harrison consists of stream deposits (from Quaternary period) generally 10 to 40 feet thick and is comprised of pebbles, cobbles, and boulders interlayered with thin beds of sand, silt, and clay. Slope wash deposits approximately 1 to 20 feet thick underlie the northern portion of Fort Harrison and consists of coarse gravels, silts and clay washed off of steeper adjacent slopes. Sedimentary bedrock consisting of sandstone, shale, limestone, and dolomite, underlies much of the southern and western portions of Fort Harrison. This bedrock is several thousand feet thick and is also found under stream deposits and slope wash.

The existing prairie dog colony at Fort Harrison, as well as the proposed relocation site, occur in stream deposits. This

geological formation appears suitable for prairie dog burrow construction although the selection of mechanically disturbed sites for burrow construction at the existing prairie dog colony suggests a moderate resistance to burrow construction. Prairie dogs are not expected to impact physiography or geology at Fort Harrison, and this resource will not be further discussed.

4.6.2 Soils

Soils in the Helena Valley are formed in alluvial terraces, or fans in deposits of primary sands and gravels, or weathered directly from rocky material. Soils in the Fort Harrison area are complex because of varying parent material, drainage patterns, and slopes. Slopes are between 0 and 8 percent for most soils. The surface layer of loam extend only to a depth of about 4 inches, and gravelly to very gravely loams and sandy loams extends to a depth of 40 to 60 inches. Soils in the Fort Harrison area have a moderately low runoff potential, and permeability is considered moderate to a depth of 20 inches and moderately rapid below this level. Depth to water table is greater than 60 inches. The hazard for wind erosion is slight and the hazard of water erosion is only slight in areas of gentle slopes. Soils at Fort Harrison with slopes less than 5% occurring in the valley floor area are suitable for prairie dog habitation.

4.7 WATER RESOURCES

Ground water in Fort Harrison area is confined to stratified lenses of cobbles, gravel, and sand. This aquifer is a major source of domestic water for local residents and most water wells in this area are less than 70 feet deep. Recharge of aquifers is through infiltration of stream flow, leakage from irrigation canals and irrigation water, and fractures in bedrock. Discharge of the ground water is through leakage into streams and withdrawals from wells. Prairie dog burrows do not reach sufficient depths to enter ground water layers and it is unlikely that prairie dogs will influence ground water. Ground water will not be discussed in Chapter 5.

Local surface water flow in the Fort Harrison area includes Ten Mile Creek and its tributaries Blue Cloud and Cherry Creeks. None of these drainages flow through the existing prairie dog colony or the proposed relocation area. Prairie dogs will not impact surface water flow at Fort Harrison and this will not be discussed in Chapter 5.

4.8 BIOLOGICAL RESOURCES

The Land Acquisition EA contains information on the plant resources of the western portion of Fort Harrison. This information includes a summary a field surveys for plant resources.

4.8.1 Vegetation

Fort Harrison is located in the western foothills of the Rocky Mountain chain. The terrain is generally flat along the eastern and northern portions but on the western and southern portions, the terrain includes foothills topography and is dissected by numerous drainages. The majority of Fort Harrison is dominated by grassland habitats and the most common grassland habitat is the bluebunch wheatgrass/western wheat grass habitat type. Lower elevations are dominated by the needle-and-thread grass/blue grama habitat type and higher elevations include the Idaho fescue/bluebunch wheatgrass habitat type.

The existing prairie dog colony and proposed release site occur within the needle-and-thread grass/blue grama habitat type. This is Montana's least productive grassland habitat and is suitable for prairie dog inhabitation. Prairie dog occupation of this habitat will frequently result in substantial vegetative changes towards perennial subshrubs and annual grasses. The habitat at both the existing prairie dog colony and proposed release site have already been impacted by introduction of non-native plants (crested wheatgrass, Kentucky bluegrass and tumble mustard), and the soil surface at both sites has also been previously disturbed by heavy equipment. Although the habitat at both sites is far from pristine prairie dogs can do well under these conditions provided there is low growing vegetation and there is a relatively level ground surface.

4.8.2 Noxious Weeds

Three noxious weeds, spotted knapweed, leafy spurge, and dalmatian toadflax occur at Fort Harrison. Of these weeds only spotted knapweed occurs in the vicinity of the proposed release site and the existing prairie dog colony. The MT ARNG maintains an active program to control noxious weeds at Fort Harrison. Approximately 170 acres are sprayed annually. In addition to the above weeds, crested wheatgrass has been widely plant on the eastern portion of Fort Harrison, and although this species is not considered a weed, it is an introduced species.

4.8.3 Wildlife

Fort Harrison is used by a variety of wildlife species. Elk and mule deer are common on the western portion. Deer tracks were also observed within the existing prairie dog colony within the cantonment area. Common bird species occurring in the needle-

and-thread grass/blue grama habitat type include the horned lark and western meadowlark.

4.8.4 Sensitive, Threatened and Endangered Species

Black-tailed prairie dogs provide habitat for several rare or uncommon wildlife species. The black-footed ferret is a Federally listed endangered species that is dependent upon prairie dogs for prey and habitat. The prairie dog colony at Fort Harrison is not large enough to support a ferret population and there are no large prairie dog colonies sufficiently close to Fort Harrison to contain a ferret population. The only known ferret population in Montana is the on the UL Bend/CMR National Wildlife Refuge in central Montana. Other rare species associated with prairie dogs include the mountain plover, burrowing owl, ferruginous hawk, and swift fox. None of these species are known to occur at Fort Harrison.

The only Federally listed threatened and endangered wildlife species occurring in the Helena Valley is the bald eagle. This species is associated with the Missouri River and its reservoirs east of Helena. The gray wolf, and grizzly bear may potentially pass through the mountainous habitat to the west of Fort Harrison but they are not associated with habitat occupied by prairie dogs. No Federally listed endangered or threatened plant species occur on Fort Harrison.

4.8.5 Wetlands

Only two sites on Fort Harrison exhibit characteristics that could qualify as wetland habitat, but neither of these sites have received official wetland determinations. On the lower portion of Fort Harrison in areas that prairie dogs could potentially inhabit, there are no wetland habitats. Wetlands will not be discussed in Chapter 5 because there is no potential for impacts resulting from this project.

4.9 CULTURAL RESOURCES

A Historical Preservation Plan for Fort Harrison (1995) noted that 48 facilities were constructed during World War II and that only 15 of these buildings warranted preservation. None of these buildings occur on or adjacent to the proposed prairie dog release site and cultural resources will not be discussed further.

4.10 SOCIOECONOMICS

4.10.1 Population and Employment

Fort Harrison is located adjacent to the city of Helena in Lewis and Clark County. Helena is a city of 35,000 people and nearly 53,000 people reside in Lewis and Clark County. The County's population growth during this decade has averaged 2.1 percent annually. There are 170 full-time employees at Fort Harrison and another 65 full-time employees at the Army Aviation Support Facility at the Helena Airport. This represents less than 1% of the County's employment. In addition, there are 350 MT ARNG members at Fort Harrison, and 250 members at the Army Aviation Support Facility. On a typical monthly drill weekend there are between 300 and 400 soldiers at Fort Harrison.

The prairie dog relocation project will not affect population and employment in the Helena Valley and this will not be discussed in Chapter 5.

4.10.2 Environmental Justice

The 1990 Census found that Lewis and Clark County's population was nearly 97% Caucasian and 2.2 percent Native American with African-American, Asian and Other comprising less than 1 percent. Hispanics, which can be any race, comprised 1.2 percent of the population. Less than 12 percent of the County's population are below the poverty level. Pursuant to Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, the proposed project has be evaluated to determine whether it would result in any disproportionately high and adverse human health or environmental effects on minority populations and low-income populations. No significant adverse impacts were identified and Environmental Justice will not be considered further in this document.

4.11 HAZARDOUS AND TOXIC MATERIALS/WASTES

The environmental programs at Fort Harrison consist primarily of hazardous materials, hazardous waste, the Installation Restoration Program, solid waste, and wastewater. All programs are managed in accordance with applicable Federal, state, local and Department of Defense regulations, standards, and laws. There are no known hazardous materials or wastes located within the relocation area and this issue will not be discussed further.

CHAPTER 5

ENVIRONMENTAL CONSEQUENCES

This chapter discusses the potential for significant impacts to the human environment as a result of implementing the Proposed Action, Lethal Control Action, and the No Action Alternatives. The human environment is defined as the natural and physical resources, and the relationship of people with those resources. The concept of significance includes the consideration of both the context and the intensity or severity of the impact. If a resource element is clearly not associated with or impacted by the Proposed Action, Lethal Control Action, or No Action Alternatives, this was so stated in Chapter 4 and that resource element is dropped from discussion in Chapter 5.

5.1 LAND USE

5.1.1 Potential Impacts of the No Action Alternative on Land Use

Under the No Action Alternative, land use at Fort Harrison will change the viability of the existing prairie dog colony. Several new buildings and completely new landscaping will cause some impacts to the existing prairie dog colony. The resulting impacts may cause the colony to become even more fragmented than at present. The No Action Alternative will not cause any impacts to adjacent landowners.

5.1.2 Potential Impacts of the Proposed Action on Land Use

The Proposed Action relocates prairie dogs to the northeastern portion of Fort Harrison out of the cantonment and training areas. Prairie dogs would not be impacted by or interfere with the renovation activity. Relocation of prairie dogs to the northeastern portion of Fort Harrison and development of a display colony may result in some additional traffic on Barrett Lane and possibly Williams Road. The increase in traffic would be slight and not expected to change air quality or to interfere with the normal activity of adjacent landowners. Prairie dogs would be prevented from dispersing onto private land by installation a barrier fence.

5.1.3 Potential Impacts of the Lethal Control Action on Land Use

The elimination of prairie dogs through lethal control would not change land use at Fort Harrison or on adjacent private lands. Renovation of Fort Harrison would continue as planned.

5.2 GEOLOGY AND SOILS

5.2.1 Potential Impacts of the No Action Alternative on Soils

The No Action Alternative would keep prairie dogs at or below their present level throughout the operation of Fort Harrison. The burrowing activity of prairie dogs hastens soil formation by turning over the soil and mixing surface organic material with subsurface soil. Potential for soil erosion (water and wind) may be higher than for unoccupied adjacent land because of increased amounts of bare ground and shorter vegetation in the prairie dog colony. However, the slope at the existing colony is less than 5 percent and the soils are rated with only slight potential for water and wind erosion on these sites. The No Action Alternative would not cause significant soil erosion and possible long-term benefits on soil development by prairie dogs would only be accrued over many decades.

5.2.2 Potential Impacts of the Proposed Action on Soils

Potential for soil erosion (water and wind) at the proposed release site may be increased due to greater amounts of bare ground and shorter vegetation. However, the slope at the proposed release site is less than 5 percent and the soils are rated with only slight potential for water and wind erosion in such sites. The Proposed Action would not cause significant soil erosion and possible long-term benefits on soil development by prairie dogs would only be accrued over many decades. The acreage occupied by prairie dogs at the release site would be similar to the existing colony and impacts to soils would be limited to a change in location rather than scale.

5.2.3 Potential Impacts of the Lethal Control Action on Soils

Prairie dogs would not be relocated to the northeastern portion of Fort Harrison and prairie dogs would be eliminated from the cantonment area. Soil development may be slowed by the loss to prairie dogs but there may also be lesser opportunity for wind and water soil erosion.

5.3 BIOLOGICAL RESOURCES

5.3.1.1 Potential Impacts of the No Action Alternative on Vegetation

The No Action Alternative would keep prairie dogs at or below their present level throughout the operation of Fort Harrison. The present vegetative condition would persist in prairie dog occupied areas. This would be closely cropped Kentucky blue

grass in maintained lawns, grazed crested wheatgrass in disturbed areas planted to this species, forb dominated disturbed sites that have not been planted to crested wheatgrass, and bare gravel in parking lots.

5.3.1.2 Potential Impacts of the Proposed Action on Vegetation

The Proposed Action would relocate prairie dogs to a disturbed needle-and-thread grass/blue grama site. Prairie dog grazing and soil disturbing activity would be expected to increase the abundance of forbs, subshrubs and annual grasses. Portions of the relocation site have been planted to crested wheatgrass and prairie dogs would be expected to graze this grass but not change its relative abundance. There are no threatened or endangered plant species at this site which would preclude the possibility of impacting these plants.

Areas vacated by prairie dogs at the existing colony would likely be planted to Kentucky bluegrass and maintained as groomed lawns following completion of the facilities renovation. The acreage occupied by prairie dogs at the release site would be similar to the existing colony and impacts to vegetation would be limited to a change in location rather than scale.

5.3.1.3 Potential Impacts of the Lethal Control Action on Vegetation

Prairie dogs would be eliminated from Fort Harrison by the fall of 1997 under the Lethal Control Action. Areas vacated by prairie dogs at the existing colony would likely be planted to Kentucky bluegrass and maintained as groomed lawns following completion of the facilities renovation. Vegetation in the vicinity of proposed release site would continue unchanged because prairie dogs would not be released there.

5.3.2.1 Potential Impacts of the No Action Alternative on Noxious Weeds

The No Action Alternative would keep prairie dogs at or below their present level throughout the operation of Fort Harrison. Noxious weeds in the existing prairie dog colony and surrounding Fort Harrison land would continue to be controlled through the use of herbicides. This control effort is directed to infested areas and the existing colony and the proposed release site may be subject to noxious weed control. Approximately 170 acres are treated annually.

5.3.2.2 Potential Impacts of the Proposed Action on Noxious Weeds

The Proposed Action would relocate prairie dogs to a disturbed needle-and-thread grass/blue grama site. Prairie dog grazing and

soil disturbing activity would be expected to increase the abundance of forbs, subshrubs and annual grasses. It would also increase the opportunity for establishment of noxious weeds due to increased abundance of bare ground. However, noxious weeds at Fort Harrison are controlled through the use of herbicides. This control effort is directed to infested areas and the proposed release site may be subject to noxious weed control. Vegetation at the existing prairie dog colony would be converted to a bluegrass lawn and noxious weeds would no longer be a factor here. The acreage occupied by prairie dogs at the release site would be similar to the existing colony and the need to control noxious weeds would be limited to a change in location rather than scale.

5.3.2.3 Potential Impacts of the Lethal Control Action on Noxious Weeds

Prairie dogs would be eliminated from Fort Harrison by the fall of 1997 under the Lethal Control Action. Areas vacated by prairie dogs at the existing colony would likely be planted to Kentucky bluegrass and maintained as groomed lawns following completion of the facilities renovation. Noxious weeds would not be a significant factor at this site. Vegetation in the vicinity of proposed release site would continue unchanged because prairie dogs would not be released there, and any noxious weeds colonizing this area would be subject to control with herbicides.

5.3.3.1 Potential Impacts of the No Action Alternative on Wildlife

The No Action Alternative would keep prairie dogs at or below their present level throughout the operation of Fort Harrison. Renovation of Fort Harrison would be expected to displace or eliminate prairie dog from several areas they now presently occupy. Prairie dog occupied areas not developed for buildings will be landscaped and habitat suitability for prairie dogs will decline as a result. Wildlife use of this colony would be expected to remain unchanged or decrease slightly as renovation of Fort Harrison progresses. However, due to the isolation and location of the existing prairie dog colony, its small size, and the scattered nature of the occupied areas, there is very little use of the colony by prairie dog associated wildlife or wildlife in general.

Prairie dogs and their burrows are host to several species of fleas. Prairie dog fleas are generally specific to prairie dogs and are reluctant to leave their host. Prairie dog fleas have not been reported as a problem at Fort Harrison, and similar results have been noted in other areas where prairie dog reside in suburban areas in Montana, South Dakota, and Colorado. Under the No Action Alternative, prairie dog fleas will continue to be present on prairie dogs and in their burrows, and in close

proximity to human occupied areas.

Prairie dog fleas are susceptible to sylvatic plague and capable of spreading plague to prairie dogs and humans. The risk of spreading plague to humans, however, is very low because fleas are generally restricted to prairie dogs and their burrows. Plague is not known to occur in the Helena Valley and the isolated nature of the Fort Harrison prairie dog colony make it unlikely that plague will be a factor in the foreseeable future.

5.3.3.2 Potential Impacts of the Proposed Action on Wildlife

The Proposed Action will relocate prairie dogs to a more open and less disturbed site than the existing colony. Wildlife use of the prairie dog colony under the Proposed Action would be expected to increase. Horned larks, mourning doves and meadowlarks would be expected to use the colony at the proposed relocation site. Burrows in the colony would likely be used by small mammals, reptiles and amphibians.

Comments specific to fleas in the above section are also valid for the relocated prairie dog colony. The acreage occupied by prairie dogs at the release site would be similar to the existing colony and the occurrence of fleas and the risk of sylvatic plague would be similar to the No Action Alternative. Differences between alternatives would be limited to a change in location rather than scale.

5.3.3.3 Potential Impacts of the Lethal Control Action on Wildlife

Prairie dogs would be eliminated from Fort Harrison by the fall of 1997 under the Lethal Control Action. Although there is little wildlife use of the existing prairie dog colony, under the Lethal Control Action there would be no opportunity for other wildlife species to use this colony. Some seed eating bird species may ingest poison grain and die. Prairie dogs poisoned with zinc phosphide will not pose a secondary poisoning hazard to scavenging wildlife or dogs. Non-target wildlife species residing in fumigated burrows would also die.

Prairie dogs, their burrows and their fleas would be eliminated and there were be no opportunity for fleas to infest humans or domestic animals. The risk of sylvatic plague would be reduced but not eliminated.

5.3.4.1 Potential Impacts of the No Action Alternative on Sensitive, Threatened and Endangered Species.

The No Action Alternative would keep prairie dogs at or below

their present level throughout the operation of Fort Harrison. The existing prairie dog colony is not used by sensitive, threatened or endangered wildlife species. Lack of use is related to the small size, isolated nature, and inappropriate habitat for these species (buildings, trees, roads and human disturbance). The low potential for use of this colony by sensitive, threatened and endangered species is expected to decrease even more as renovation of Fort Harrison progresses.

5.3.4.2 Potential Impacts of the Proposed Action on Sensitive, Threatened and Endangered Species.

The Proposed Action will relocate prairie dogs to a more open and less disturbed site than the existing colony. However, potential for use of the prairie dog colony by sensitive, threatened and endangered species under the Proposed Action would not differ substantially from the No Action Alternative. Lack of use by sensitive, threatened and endangered species would be related to the small size of the colony and its isolated nature.

5.3.4.3 Potential Impacts of the Lethal Control Action on Sensitive, Threatened and Endangered Species.

Prairie dogs would be eliminated from Fort Harrison by the fall of 1997 under the Lethal Control Action. Although there is no use of the existing prairie dog colony by sensitive, threatened or endangered species, under the Lethal Control Action there would be no opportunity for these wildlife species to use this colony.

5.4 CUMULATIVE IMPACTS

There are no cumulative impacts associated with the Proposed Action. The No Action Alternative may result in a slow gradual attrition of prairie dogs during and after renovation, and population persistence is not assured over the long-term. The Lethal Control Action will result in the loss of the Fort Harrison prairie dog colony. This represents a cumulative loss of prairie dogs from the Helena Valley and would result in less than five remaining prairie dog colonies in the Valley. The long-term population persistence of these other prairie dog colonies is uncertain.

CHAPTER 6

CONCLUSION

6.1 COMPARISON OF ALTERNATIVES

The Proposed Action to relocate prairie dogs to a 5.7-acre area within the northeastern portion of Fort Harrison will not significantly impact land use, soils or biological resources. Relocation of prairie dogs will assure the long-term persistence of the prairie dog colony and allow for public viewing of prairie dogs. There may also be opportunity to use Fort Harrison prairie dogs to restock depleted colonies on the CMR in 1997 and in future years.

The Lethal Control Action will eliminate prairie dogs from Fort Harrison, and contribute in a cumulative manner to the decline of prairie dogs in the Helena Valley. Existing prairie dog colonies in the Helena Valley are generally small, fragmented, and isolated. Long-term population persistence of prairie dogs in the Valley is not assured.

The No Action Alternative does not assure the long-term population persistence of prairie dogs at Fort Harrison. Although prairie dogs may survive the early phases of the Fort Harrison renovation project, there is a chance that population viability may be compromised following landscaping and completion of the building projects. Possible eventual loss of prairie dogs would contribute to a cumulative decline in the prairie dog population in the Helena Valley.

6.2 MITIGATION MEASURES

Flea populations in prairie dog burrows can be regulated through the use of insecticidal dust. If fleas should be reported at local residences, prairie dog burrows in the proposed relocation area could be dusted to kill the flea source. The use of prairie dog proof fencing will effectively prevent the dispersal of prairie dogs upon private lands. Public entrance to the prairie dog viewing area will be from the Fort Harrison side and this will minimize the use of Barrett Lane and reduce potential for increased dust, noise, traffic on Barrett Lane.

This project will have no significant environmental impacts and a Finding of No Significant Impacts is recommended.

CHAPTER 7

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CHAPTER 8

ACRONYMS AND ABBREVIATIONS

The following is a list of acronyms used in this document:

EA = Environmental Assessment

CMR = Charles M. Russell National Wildlife Refuge

MT ARNG = Montana Army National Guard

TES = Sensitive, Threatened, and Endangered species

VA = Veterans Administration